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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hiroshi Kubota

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EXAMINER

SAN MARTIN, EDGARDO

ART UNIT

PAPER NUMBER

2832

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,318	Applicant(s) KUBOTA, HIROSHI	
	Examiner Edgardo San Martin	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 – 3, 5, 6, 11, 14, 19 – 21, 23, 24 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams (US 7,177,437).

With respect to claims 1 and 23, Adams teaches a sound wave guide structure for a speaker system (Fig.1A) comprising a sound passage space connecting an inlet opening (Fig.1A, Item 124) to an outlet opening (Fig.1A, Item 132); the sound passage space defining a longitudinal axis; a plurality of branch points (Fig.1A, Items 126a and 126b) formed within the sound passage space, each of the branch points arranged to branch a portion of the sound passage space from one branch path to two branch paths (Fig.1A); and a plurality of stages spaced apart along the longitudinal axis, each of the plurality of branch points disposed at one of the plurality of stages (Fig.1A).

With respect to claims 2, 3, 5, 6, 11, 14, 19 – 21, 24 and 26, Adams teaches the limitations described in the claims (Figs.1A and 1B).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 7,177,437) in view of Smythe (US 1,871,243).

Adams teaches the limitations discussed in a previous rejection, but fails to disclose wherein the sound wave guide is a curved or bent plane.

Nevertheless, Smythe teaches a sound wave guide structure for a speaker system comprising sound modifying structure and wherein the sound wave guide is a curved or bent plane.

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Smythe curved or bent plane sound wave guide configuration with the Adams design because the curved plane sound wave guide would enhance the quality of the reproduced sound in the higher frequencies.

3. Claims 7 – 10, 12, 13, 16 – 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (US 7,177,437) in view of Daniel (US 3,957,134).

With respect to claims 7 – 10, Adams teaches the limitations discussed in a previous rejection, but fails to disclose wherein the outlet opening of the slit shape extends to be curved in a convex or concave curved line shape.

On the other hand, Daniel teaches a sound wave structure (Fig.1) wherein the outlet opening extends to be curved in a convex curved line shape (Fig.1).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Daniel configuration with the Adams design because it would permit the sound waves coming out of the structure to be refracted in a desired way in this manner controlling the directivity of the sound waves in a predetermined frequency range.

Regarding claims 9 and 10, the Examiner considers that it would have been an obvious matter of design choice to provide the outlet opening extending to be curved in a concave curved line shape because it would also permit the sound waves coming out of the structure to be refracted in a desired way in this manner controlling the directivity of the sound waves in a predetermined frequency range; in this particular case, the sound waves would be directed to converge in a predetermined point, contrary to the convex shape that would widen the angle of reproduction.

With respect to claims 12 and 16 - 18, Daniel teaches wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening has a shorter path length (Fig.1); and wherein at least part of at least one of the plurality of sound wave guide paths extends in a S shape or wherein at least one of the plurality of sound wave guide paths has a largest height in an intermediate region between the inlet opening and the outlet opening of the sound passage space (Fig.1).

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With respect to claims 13, the Examiner considers that it would have been an obvious matter of design choice to provide wherein the sound wave guide path having an outlet at a position closer to a center of the outlet opening of the slit shape has a longer path length because it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

With respect to claim 25, the Examiner considers that it would have been an obvious matter of design choice to have a stage being disposed adjacent a midpoint between the second one of the plurality of stages and the tip end of the throat measured along the longitudinal axis because it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8; and also, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Response to Arguments

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers that the patent to Adams and in obvious combination with the patents to Smythe and Daniel teach the limitations described in the claims as discussed above.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571)272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edgardo San Martin/

Edgardo San Martín
Primary Examiner
Art Unit 2832
Class 181
August 13, 2009